

Claims

1. A method of applying a metal coating on the surface of powders which comprises degreasing, cleaning and drying of the powders and mechanical smearing of the particles of a compound chosen from the group of metal oxides, metal hydroxides, metal sulfides wherein metals are limited by copper, nickel, aluminium, zinc, titanium, tungsten, germanium, gold, cobalt, molybdenum, tin, palladium, platinum, on the surface of the material with formation of a thin film coating and with a subsequent reduction of the compound by means of heating in non-oxidizing atmosphere.
2. A method as claimed in claim 1, wherein said mechanical smearing of said compound particles on powders is carried out by mixing in mills and mixers.
3. A method as claimed in claim 1, wherein copper monoxide or dioxide or nickel monoxide are used as said compounds which form the metal coating, and reduction by means of heating is performed in non-oxidizing atmosphere at temperatures 200-500 °C.
4. A method as claimed in claim 1, wherein the material to be coated is an abrasive powder.
5. A method as claimed in claim 1, wherein one or several secondary layers of metal are applied to the surface of the primary metal layer and/or metal layer is protected from oxidation by treatment in organic solvents after cooling of the coated material.
6. A method of applying a metal coating on the surface of powders which comprises degreasing, cleaning and drying of the powders and mechanical smearing of the particles of a compound chosen from the group of metals and metal alloys wherein metals are limited by copper, nickel, aluminium, zinc, titanium, tungsten, germanium, gold, cobalt, molybdenum, tin, palladium, platinum, on the surface of the material with formation of a thin film coating.
7. A method as claimed in claim 6, wherein said mechanical smearing of said metals and alloys is performed by dry or wet milling in high energy planetary mills with accelerations not less than 20-30 G wherein G is the gravitational field acceleration, and solvent used in wet milling is removed by means of heating in non-oxidizing atmosphere at temperatures 200-300 °C.
8. A method as claimed in claim 6, wherein metal layer obtained is heated in an oxidizing atmosphere with the aim to obtain metal oxide layer.

9. A method of applying a metal coating on the surface of substrates which comprises degreasing, cleaning and drying of the powders and mechanical smearing of the particles of a compound chosen from the group of metal oxides, metal hydroxides, metal sulfides wherein metals are limited by copper, nickel, aluminum, zinc, titanium, tungsten, germanium, gold, cobalt, molybdenum, tin, palladium, platinum, on the surface of the material with formation of a thin film coating and with a subsequent reduction of the compound by means of heating in non-oxidizing atmosphere.
10. A method as claimed in claim 9, wherein said mechanical smearing of said particles on flat surfaces is carried out with the help of spreading said particles on the surface by rolling or by pouring a suspension with a high content of the solid phase with a subsequent drying and rolling.